

Topic: Simplifying fractions and cancellation**Question:** Simplify $50/85$ to lowest terms.**Answer choices:**

A $\frac{10}{17}$

B $\frac{25}{42}$

C $\frac{3}{4}$

D $\frac{10}{15}$



Solution: A

Let's find the prime factorizations of the numerator and the denominator.

$$\frac{50}{85}$$

$$\frac{5 \cdot 5 \cdot 2}{17 \cdot 5}$$

The only factor that's common to the numerator and denominator is 5. Since 5 occurs twice as a factor in the numerator but only once in the denominator, we'll cancel one of the 5's in the numerator against the 5 in the denominator, leaving just

$$\frac{5 \cdot 2}{17}$$

$$\frac{10}{17}$$



Topic: Simplifying fractions and cancellation**Question:** Simplify $6/30$ to lowest terms.**Answer choices:**

A $\frac{1}{10}$

B $\frac{4}{7}$

C $\frac{2}{3}$

D $\frac{1}{5}$



Solution: D

We realize that 6 and 30 have a common factor of 6. Therefore, we'll divide both the numerator and denominator by 6.

$$\frac{6 \div 6}{30 \div 6}$$

$$\frac{1}{5}$$

The fraction can't be reduced any further.



Topic: Simplifying fractions and cancellation**Question:** Simplify $14/21$ to lowest terms.**Answer choices:**

A $\frac{1}{3}$

B $\frac{2}{3}$

C $\frac{7}{2}$

D $\frac{2}{7}$



Solution: B

We realize that 14 and 21 have a common factor of 7. Therefore, we'll divide both the numerator and denominator by 7.

$$\frac{14 \div 7}{21 \div 7}$$

$$\frac{2}{3}$$

The fraction can't be reduced any further.

